

Date of issue: 16 June 2014

1. Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier:

Trade name: **Rifle, pistol and revolver cartridges
with Centerfire cartridges with BOXER primer
and NONTOX composition**

1.2 Relevant identified uses of the product:

Ammunition for sports, hunting and defence purposes.

1.3 Producer Identification:

Sellier & Bellot a.s.

Lidická 667

258 01 Vlašim

Czech Republic

Phone: +420 317 891 111

contact to responsible persons for this MSDS: kremlova@sellier-bellot.cz
kratochvil@sellier-bellot.cz

1.4 Emergency telephone number:

National advisory body: You can consult first aid details with the Toxicological information centre (TIS): Klinika nemocí z povolání (Department of occupational diseases), Na Bojišti 1, 128 08 Prague 2, phone: 224 919 293 or 224 915 402. Non-stop poison emergency line.

2. Hazards identification

According to Article 3 of Regulation (EC) No 1907/2006 of the European Parliament and of the Council the cartridges are considered to be an article comprising four basic parts: bullet, cartridge case, propellant (powder) and primer.

Dangerous composition inside the cartridge (primer composition and other compositions in the cartridge - propellant) are an integral part of the cartridge.

Some types of cartridges may contain dinitrotoluene (CAS No.121-14-2) and dibutyl phthalate (CAS No. 84-74-2) as propellant in quantities exceeding 0.1% of the total weight of the cartridge. Both substances are listed in the List of Substances Subject to Authorisation - Annex XIV of the REACH Regulation.

Under recommended conditions of storage, handling and use, the substances are not intended to be released in accordance with Article 7 par. 1 b) of the REACH Regulation.

2.1 Classification of the product:

2.1.1 according to Regulation (EC) No 1272/2008 (CLP)

Hazard class: **Article containing an explosive**
Hazard category: Division 1.4
Code: Expl. 1.4

2.1.2 according to Directive 1999/45/EC: not applicable

2.2 Label elements:

2.2.1 according to Regulation (EC) No 1272/2008:



Hazard pictograms:

Signal word:

Hazard statements:

Precautionary statements:

WARNING

H 204 Fire or projection hazard.

P 210 Keep away from heat/sparks/open flames/hot surfaces. — No smoking.

2.2.2 according to Directive 1999/45/EC:

This directive does not specify any labelling for this article.

2.3 Other hazards

The cartridge contains dangerous substances in the form of pressed composition. These substances are not released from the cartridge under normal and recommended way of use.

Risk of explosion may be caused by fire, by a spark, flame or other sources of ignition (e.g. static electricity, mechanical/electrical device).

In case of accidental fire, the individual cartridges are activated without the transition to mass explosion (collective explosion). Spray of individual cartridge elements with low weight may occur (e.g. cartridge casing fragments, bullets, primer cups), which can cause eye damage or burn unprotected skin.

Potential effects on human health in case of fire (or after firing):

- no acute effect is known during normal handling
- skin contact - can cause allergic reaction in sensitive individuals
- eye contact - combustion gases (smoke) may irritate the eyes, cause eye redness and lacrimation
- inhalation - inhalation of combustion gases may cause irritation of the nose, larynx, upper respiratory tract and lungs Irritation may lead to bronchitis, headache, lowering of blood pressure and general weakness.
- ingestion - absorption may cause strong headache, nausea, vomiting, abdominal pain, fatigue, diarrhoea, tremor, ringing in the ears and salivation

Disassembly of cartridges is prohibited.

3. Composition/information on ingredients

The cartridges comprise four basic parts (elements):

- bullet: lead (may contain small portion of antimony) brass (copper + zinc), iron
- cartridge case: brass
- primer: brass primer cup is filled with dry priming composition with the trade name NONTOX, which is covered with a paper cover disc. A three-winged anvil is pressed into the filled cup. All primer parts create a solid unit.
NONTOX priming composition: mixture of tetrazene, penthrite, potassium nitrate and other compounds
- propellant: mixture of nitrocellulose, dinitrotoluene, diphenylamine, nitroglycerine, centralite I, ethyl acetate and other compounds

The inner surface of the case neck can be coated with asphalt coating or the entire surface of the cartridge may be waxed.

Used materials (chemical substances and preparations) classified as hazardous according to CLP are specified in the following table, including their weight percentage of individual chemicals contained in the components

3.1 Priming composition, integral part of the cartridge

Hazardous substances in the mixture:

Chemical substance	CAS No.	EC No.	% in the composition	classification according to Regulation (EC) No 1272/2008 (CLP)		classification according to Directive 67/548/EEC
tetrazene or: 1- (5'tetrazolyl) - 4 - guanyl tetrazene	31330-63-9		30 - 34	Expl.	H201	E; R3
				Skin Irrit.	H315	
				Eye Irrit.	H319	
				Acute Tox. 4.	H302	
				Acute Tox. 4.	H332	
penthrite	78-11-5	201-084-3	30 - 34	Expl.	H201	E; R3
potassium nitrate	7757-79-1	231-818-8	16.6	Ox. Sol. 2.	H272	O; R8
				Skin Irrit.	H315	
				Eye Irrit.	H319	
				Respiratory irrit.	H335	
boron	7440-42-8	231-151-2	2.9	Acute Tox. 4.	H302	

3.2 Propellant, integral part of the cartridge

Hazardous substances in the mixture:

Chemical substance	CAS No.	EC No.	% in the propellant	classification according to Regulation (EC) No 1272/2008 (CLP)	classification according to Directive 67/548/EEC
nitroglycerine	55-63-0	200-240-8	0-42	Ox. Sol. 3; H272 Repr. 1A; H360 - Df Acute Tox. 4; H332 Acute Tox. 4; H302 STOT RE 2; H373 Aquatic Acute 1; H400 Aquatic Chronic1; H410	E; R3 T+; R26/27/28 Xn; R33 N; R51/53
Nitrocellulose	9004-70-0	215-174-5	remaining portion	Expl. 1.1; H201	E; R11
diphenylamine	122-39-4	204-539-4	0-1.50	Acute Tox. 3. H301+H311+H331 STOT RE 2; H373 Aquatic Chronic1; H410	T; R23/24/25-33 N; R50-53
dinitrotoluene	121-14-2	204-450-0	0 - 16	Carc.1B; H350 Muta.2; H341 Repr. 2; H361 - Df Acute Tox. 3. H301,H311,H331 STOT RE 2; H373 Aquatic Chronic 1; H410	Carc. 2, R45 Muta. 3, R68 Repr. 3; R62 T; R23/24,25 Xn; R48/22 N; R50-53
centralite I	85-98-3	201-645-2	0 - 8	Acute Tox. 4; H302 Aquatic Chronic 3; H412	Xn; R22 N; R 52/53
ethyl acetate	141-78-6	205-500-4		Flam. Liq. 2;H225 Eye Irrit. 2; H319 STOT SE 3; H336	F; R11 Xi; R36 R 66-67
dibutyl phthalate	84-74-2	201-557-4	0 - 9	Repr.1B; H360 - Df Aquatic Acute 1; H400	Repr. 2; R61 Repr. 3; R62 N; R50

For full wording of R, H and EUH phrases refer to Section 16.

3.3 Other information

Other substances contained in the mixture are not hazardous or are under the limit used for assessment according to Directive 1999/45/EC.

4. First aid measures

First aid may be necessary when substances are released from cartridges, e.g. during disassembly.

Inhalation:

The following symptoms may develop: unconsciousness, vomiting, cardiac dysrhythmia, headache, convulsions, blurred vision, nausea.

Interrupt exposure, remove the affected person to fresh air. In case of unconsciousness, start resuscitating (artificial respiration, cardiopulmonary resuscitation) and seek medical advice.

Skin contact:

Remove contaminated clothing and wash thoroughly with soap and water (lukewarm if possible). Do not use solvents or thinners. If the problems persist, seek medical attention.

Eye contact:

Flush eyes with a gentle stream of water for at least 15 minutes. Use your thumb and index finger to hold eyelids wide open. Remove contact lenses, if present and easy to do before flushing. Seek specialized medical attention.

Ingestion:

Rinse mouth with fresh water, drink ca. 0.2-0.3 l of water (lukewarm if possible) with a spoon of liquid soap and powder or crushed activated charcoal corresponding to ca. 5 tablets. Induce vomiting within one hour from ingestion. Do not induce vomiting during unconsciousness, convulsions or general bad state.

Administer activated charcoal regardless of whether vomiting was induced or not. Seek medical attention.

5. Firefighting measures

5.1 Extinguishing media:

Water spray, extinguishing powder, foam, CO₂ or just soil.

5.2 Special hazards arising from the substance:

Toxic substances may be released during combustion - nitrogen oxides, carbon oxides and metal oxides.

In case of fire, **the individual cartridges are activated without transition to mass explosion (collective explosion)**. As spray of individual cartridge elements with low weight may occur, fire should be extinguished from a safe distance (at least 5 metres), protective clothing and eye protection must be used. Prevent movement of unauthorized persons in the vicinity of fire.

During transport the crew must not try to extinguish fire of the load (transported cartridges). There is a risk of eye damage or burns to unprotected skin.

5.3 Advice for firefighters:

Use fireproof turnout gear with face shield (e.g. OL 2 type), self-contained breathing apparatus (or respirator).

Fire characteristics of materials

NONTOX priming composition: ignition temperature 135-150 °C

Propellant: flash point – 140 °C

ignition temperature – 135 °C

Inserts (plastic, cardboard): burn when ignited.

Packaging (cardboard, layered cardboard): packaging must be protected before sources of heat with temperature exceeding 100 °C during storage, ignition temperature 427 °C.

6. Accidental release measures**6.1 Personal precautions**

Prevent free movement of persons in the place of release. Prevent contact of spilled primers or priming compositions with open fire, electric sparks and chemically aggressive substances.

6.2 Environmental precautions

Avoid contamination of soil and water with priming compositions. Do not throw cartridges or their parts into the sewer.

6.3 Methods and material for containment and cleaning up

Sweep up the spilled cartridges, primers, priming compositions or parts of primers carefully and place them into leakproof packages as waste (this waste is considered dangerous waste and must be handled as dangerous waste according to ADR, including the used package), do not raise dust, ventilate the area. Dispose of waste at an approved waste disposal facility in accordance with applicable regulations. Prevent release into the sewer. Use tools made of non-sparking materials.

For more information refer to Section 13.

7. Handling and storage**7.1 Precautions for safe handling**

Handle cartridges according to regulations for use of ammunition. The users must be made familiar with these regulations. There is no danger during normal handling. Do not eat, drink, smoke or use open fire when handling cartridges. The cartridges must be protected from the effects of radiating heat and mechanical or electrical sparks. The cartridges may not be exposed to impact or mechanical friction. **It is prohibited to disassemble, modify or rough-handle the cartridges!**

Wash your hands with lukewarm water and soap after work and especially before eating, it is recommended that you use protective hand cream after washing.

7.2 Conditions for safe storage

The cartridges must be stored in their original packaging in dry, clean and ventilated storerooms and they must be protected against weather effects, soil moisture, radiating heat of heating elements and against direct sunshine. They may not be exposed to mechanical impacts. Relative air humidity in storerooms must not exceed 60 %, air temperature must be between 5 °C and 30 °C. The primers must be stored so that safety requirements of applicable regulations are met.

8. Exposure controls/personal protection

8.1 Recommended exposure limits for professional use

Chemical substance	CAS No.	EC No.	PEL (mg/m ³)	NPK-P (mg/m ³)	legislation
carbon oxide	630-08-0	211-128-3	30	150	Government decree No. 361/2007 Coll.
carbon dioxide	124-38-9	204-696-9	9000	45000	Government decree No. 361/2007 Coll.
dust			10	150	Government decree No. 361/2007 Coll.

Exposure limits of individual substances are specified in national regulations of the Czech Republic.

8.2 Exposure controls

Engineering controls

Sealing, local exhaustion, ventilation.

Personal protection

Hand protection - it is recommended that you wear gloves during long-term handling of cartridges.

Body protection - work clothing.

Other - do not eat, drink, smoke or use open fire when handling cartridges. Observe personal hygiene principles. Eye protection and hearing protection is recommended during shooting.

In case of high concentration of smoke, it is recommended that you use an approved respirator. Store the cartridges away from ignition sources.

9. Physical and chemical properties

Appearance	compact unit comprising the case, bullet and primer
Form	solid
Odour	no
Specific weight	not applicable
Bulk density	not applicable
Boiling point	not applicable
Melting point	not applicable
Vapour density	not applicable
Evaporation rate	not applicable
Solubility in water	not applicable
pH	not applicable

10. Stability and reactivity

The product is stable under normal conditions of use (pressure, temperature).

10.1 Conditions to avoid

Rough handling, effects of intense radiating heat, flame, mechanical or electrical sparks, static electricity and effects of impact or friction.

10.2 Incompatible materials

Chemically aggressive acidic or alkaline substances and strong oxidizing agents.

10.3 Hazardous decomposition products

Toxic nitrogen oxides, carbon oxides and metal oxides may be released during combustion.

11. Toxicological information

Not available.

Hazardous substances contained in the product may be harmful, however, as they are encapsulated in the product, their releasing is not expected under normal conditions of use.
It is prohibited to disassemble the cartridges.

12. Ecological information

Not available.

Hazardous substances contained in the product may be harmful to the environment, however, as they are encapsulated in the product, their releasing into the environment is not expected under normal conditions of use.
It is prohibited to disassemble the cartridges.

13. Disposal considerations

Cartridges and their parts are considered dangerous articles. The user of this product is responsible for using this product and handling its remnants (waste) and the packaging. Proceed in compliance with all relevant local regulations and laws in respect to handling and storage of the products and their waste.

Non-contaminated packaging is suitable for recycling. Initiated cases can be recycled.

Cases that have not been initiated may not be handed over for disposal to an unauthorised person.
Proceed according to regulations on the use and disposal of ammunition.

14. Transport information**Transport by road and rail (ADR/RID)**

Classification	1.4 S
UN No.	UN 0012
Official designation	CARTRIDGES, SMALL ARMS or CARTRIDGES FOR WEAPONS, INERT PROJECTILE
Safety label	no. 1.4
Packaging group	not applicable (packagings must meet requirements for packaging group II)

Remark: Cartridges may be transported in accordance with 1.1.3.6 ADR – Exemptions related to quantities carried per transport unit.

Transport by inland waterways and sea (ADN/IMDG-Code)

Classification	1.4 S
UN No.	UN 0012
Official designation	CARTRIDGES, SMALL ARMS or CARTRIDGES FOR WEAPONS, INERT PROJECTILE
Safety label	no. 1.4
Packaging group	not applicable (packagings must meet requirements for packaging group II)

Transport by air (ICAO/IATA-DGR)

Classification	1.4 S
UN No.	UN 0012
Official designation	CARTRIDGES, SMALL ARMS or CARTRIDGES FOR WEAPONS, INERT PROJECTILE
Safety label	no. 1.4
Packaging instructions	PGI 130
Packaging group	not applicable (packagings must meet requirements for packaging group II)

Remark: Transport packaging up to 25 kg net weight can be transported by personal air transport and up to 100 kg net weight can be transported by freight air transport.

15. Regulatory information

EU legislation:

REACH regulation: Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals, as amended

CLP regulation: Regulation (EC) No 1272/2008 of the European Parliament and of the Council on classification, labelling and packaging of substances and mixtures

Dangerous Substances Directive 67/548/EEC

Dangerous Preparations Directive 1999/45/EC

Legislation in the Czech Republic:

Government Decree No. 361/2007 Coll., laying down conditions for the protection of employees' health at work, as amended

Act No. 258/2000 Coll., on public health protection, as amended

Act No. 262/2006 Coll., the labour code, as amended

Act No. 201/2012 Coll., on air pollution, as amended

Act No. 350/2011 Coll., on chemical substances and chemical compositions, as amended

Decree of the Ministry of Interior No. 246/2001, Coll., on fire prevention and related legal provisions, as amended

Act No. 119/2002 Coll., on firearms and ammunition, as amended

Statement of the Ministry of Foreign Affairs of the Czech Republic No. 8/2013 Collection of International Treaties, The European Agreement concerning the International Carriage of Dangerous Goods by Road (ADR), as amended

16. Other information**R, H and EUH statements used in Section 3.1:****Classification according to Directive 67/548/EEC (DSD)**

R3	Extreme risk of explosion by shock, friction, fire or other sources of ignition
R 8	Contact with combustible material may cause fire
R 10	Flammable
R11	Highly flammable
R 20	Harmful by inhalation
R 15/29	Contact with water liberates toxic, extremely flammable gases
R 20/22	Harmful by inhalation and if swallowed
R 22	Harmful if swallowed
R 23/24/25	Toxic by inhalation, in contact with skin and if swallowed
R 26/27/28	Very toxic by inhalation, in contact with skin and if swallowed
R 33	Danger of cumulative effects
R 36	Irritating to eyes
R41	Risk of serious damage to eyes
R 50/53	Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment
R 51/53	Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment
R 52/53	Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment
R 61	May cause harm to the unborn child
R 62	Possible risk of impaired fertility
R 66	Repeated exposure may cause skin dryness or cracking
R 67	Vapours may cause drowsiness and dizziness

Classification according to Regulation (EC) No 1272/2008 (CLP)

H 201	Explosive; mass explosion hazard.
H 225	Highly flammable liquid and vapour.
H 272	May intensify fire; oxidiser.
H 301	Toxic if swallowed.
H 302	Harmful if swallowed.
H 311	Toxic in contact with skin.
H 315	Causes skin irritation.
H 319	Causes serious eye irritation.
H 331	Toxic if inhaled.
H 332	Harmful if inhaled.
H 336	May cause drowsiness or dizziness.
H 341	Suspected of causing genetic defects.
H 350	May cause cancer.
H 373	May cause damage to organs.
H 400	Very toxic to aquatic life.
H 410	Very toxic to aquatic life with long lasting effects.
H 411	Toxic to aquatic life with long lasting effects.
H 412	Harmful to aquatic life with long lasting effects.
H 360-Df	May damage fertility or the unborn child.
H 361-Df	Damage of fertility or the unborn child.
EUH 066	Repeated exposure may cause skin dryness or cracking

The information provided in this MSDS is based on our current knowledge and experience. It describes the product with the focus on safe handling of the product - its use, storage, handling and disposal, and cannot be considered guaranteed values. The user is responsible for compliance with valid laws and regulations when using our products.